IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended) A plasma processing method comprising the step of:

etching a silicon layer of an object to be processed by employing a patterned mask and by using a plasma of a processing gas introduced into an airtight processing chamber, containing a gaseous mixture of HBr, O_2 and SiF_4 and, additionally, one or both of SF_6 and NF_3,

wherein the patterned mask includes at least an oxide layer containing silicon and wherein a gas containing C and F is further added to the processing gas to prevent deposits from being accumulated at openings of the patterned mask or to remove deposits accumulated at the openings of the patterned mask.

Claim 2 (Original): The plasma processing method of claim 1, wherein the gas containing C and F is one or more gases selected from the group consisting of CF_4, C_4F_8, C_5F_8, C_4F_6, CHF_3 and CH_2F_2.

Claim 3 (Original): The plasma processing method of claim 1, wherein the gas containing C and F is added to the processing gas in a middle of the etching step.

Claim 4 (Original): The plasma processing method of claim 3, wherein the gas containing C and F is continuously added to the processing gas until the end of the etching step.

Claim 5 (Original): The plasma processing method of claim 1, wherein the gas containing C and F is added to the processing gas for a period of time during the etching step.

Claim 6 (Original): The plasma processing method of claim 1, wherein the timing of starting to add the gas containing C and F to the processing gas is determined according to the opening diameter of holes or the opening width of grooves formed by the etching step.

Claim 7 (Original): The plasma processing method of claim 1, wherein the opening diameter of holes or the opening width of grooves formed by the etching step is smaller than or equal to about 0.2 μm.

Claim 8 (Cancelled)

Claim 9 (New): The plasma processing method of claim 1, wherein the deposits accumulated at the openings of the patterned mask includes $SiBr_xO_y$, x and y being combination ratios.